#10

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RAW SEQUENCE LISTING DATE: 03/18/2002 P.S
PATENT APPLICATION: **US/09/813,775C** TIME: 15:26:57

Input Set : **A:\GENENT.057CP2113001.txt**
Output Set: **N:\CRF3\03182002\I813775C.raw**

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      4 <110> APPLICANT: DeSauvage, Frederick
      5       Henner, Dennis, J.
      7 <120> TITLE OF INVENTION: Novel chimpanzee erythropoietin
      8       polypeptides and nucleic acids encoding the same
     11 <130> FILE REFERENCE: GENENT.057CP2
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/813,775C
C--> 13 <141> CURRENT FILING DATE: 1999-05-07
     13 <150> PRIOR APPLICATION NUMBER: US 09/307307
     14 <151> PRIOR FILING DATE: 1999-05-07
     16 <150> PRIOR APPLICATION NUMBER: US 09/552265
     17 <151> PRIOR FILING DATE: 2000-04-19
     19 <160> NUMBER OF SEQ ID NOS: 52
     21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     23 <210> SEQ ID NO: 1
     24 <211> LENGTH: 2329
     25 <212> TYPE: DNA
     26 <213> ORGANISM: Pan troglodytes
     28 <220> FEATURE:
     29 <221> NAME/KEY: misc_feature
     30 <222> LOCATION: (1)...(2329)
     31 <223> OTHER INFORMATION: n = a, t, c or g
     33 <400> SEQUENCE: 1
     34 ccccctggac agccgccctc tcctccaggc ccgtggggct ggccctgcac cgccgagctt      60
     35 cccgggatga gggccccccgg tgtggtcacc cggcgcgccc caggtcgctg agggaccccg     120
     36 gccaggcgcg gagatggggg tgcacggtga gtactcgcgg gctgggcgct cccgcccgcc     180
     37 cgggtccctg tttgagcggg gatttagcgc ccgggctatt ggccgggagg tggctgggtt     240
     38 caaggaccgg cgacttgtca aggaccccgg aaggggggagg ggggtggggc agcctccacg     300
     39 tgccagcggg gacttggggg agtccttggg gatggcaaaa acctgacctg tgaaggggac     360
     40 acagtttggg ggttgagggg aagaaggttt gggggttctg ctgtgccagt ggagaggaag     420
W--> 41 ctgataagct gataacctgg gcgctggagc caccacttat ctgccagagg gnnnntggta     480
     42 gctgggggtg gggtgtgcac acggcagcag gattgaatga aggccaggga ggcagcacct     540
     43 gagtgcttgc atggttgggg acaggaagga cgagctgggg cagagacgtg gggatgaagg     600
     44 aagctgtcct tccacagcca cccttctccc tccccgcctg actctcagcc tggctatctc     660
     45 ttctagaatg tcctgcctgg ctgtggcttc tcctgtccct gctgtcgctc cctctgggcc     720
     46 tcccagtcct gggcgcccca ccacgcctca tctgtgacag ccgagtcctg gagaggtacc     780
     47 tcttggaggc caaggaggcc gagaatatca cggtgagacc ccttccccag cacattccac     840
     48 agaactcacg ctcagggctt cagggaactc ctcccagatc caggaacctg gcacttggtt     900
     49 tggggtggag ttgggaagct agacactgcc cccctacata agaataagtc tggtggcccc     960
     50 aaaccatacc tggaaactag gcaaggagca aagccagcag atcctacggc ctgtgggcca    1020
     51 gggccagagc cttcagggac ccttgactcc ccgggctgtg tgcatttcag acgggctgtg    1080
     52 ccgaacactg cagcttgaat gagaatatca ctgtcccaga caccaaagtt aatttctatg    1140
     53 cctggaagag gatggaggtg agttcctttt ttttttttt tcctttcttt tggagaatct    1200
     54 catttgcgag cctgattttg gatgaaaggg agaatgatcg agggaaaggt aaaatggagc    1260
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Output Set: N:\CRF3\03182002\I813775C.raw

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     55 agcagagatg aggctgcctg ggcgcagagg ctcacgtcta taatcccagg ctgagatggc    1320
     56 cgagatggga gaattgcttg agccctggag tttcagacca acctgggcag catagtgaga    1380
     57 tcccccatct ctacaaacat ttaaaaaaat tagtcaggtg aggtggtgca tggtggtagt    1440
     58 cccagatatt tggaaggctg aggcgggagg atcgcttgag cccaggaatt tgaggctgca    1500
     59 gtgagctgtg atcacaccac tgcactccag cctcagtgac agagtgaggc cctgtctcaa    1560
     60 aaaagaaaag aaaaaagaaa aataatgagg gctgtatgga atacattcat tattcattca    1620
W--> 61 ctcactcatt cattcattca ttcattcnnn nnntcttatt gcatacctct gtttgctcag    1680
     62 cttggtgctt ggggctgctg aggggcagga gggagagggt ggcatgggtc agctgactcc    1740
     63 cagagtccac tccctgtagg tcaggcagca ggccgtagaa gtctggcagg gcctggccct    1800
     64 gctctcggaa gctgtcctgc ggggccaggc cctgttggtc aactcttccc agccgtggga    1860
     65 gcccctgcag ctgcatgtgg ataaagccgt cagtggcctt cgcagcctca ccactctgct    1920
     66 tcgggctctg ggagcccagg tgagtaggag cggacacttc tgcttgccct ttctgtaaga    1980
     67 aagggagaag ggtcttgcta aggagtacag gaactgtccg tattccttcc ccttctgtgg    2040
     68 cactgcagcg acctcctgtt ttctccttgg cagaaggaag ccatctcccc tccagatgcg    2100
     69 gcctcagctg ctccactccg aacaatcact gctgacactt tccgcaaact cttccgagtc    2160
     70 tactccaatt tcctccgggg aaagctgaag ctgtacacag gggaggcctg caggacaggg    2220
     71 gacagatgac caggtgtgtc cacctgggca tatccaccac ctccctcacc aacattgctt    2280
     72 gtgccacacc ctccccgcc actcctgaac cccgtcgagg agctctcag                 2329
     74 <210> SEQ ID NO: 2
     75 <211> LENGTH: 193
     76 <212> TYPE: PRT
     77 <213> ORGANISM: Pan troglodytes
     79 <400> SEQUENCE: 2
     80 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
     81  1               5                  10                  15
     82 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
     83             20                  25                  30
     84 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
     85         35                  40                  45
     86 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
     87     50                  55                  60
     88 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
     89 65                  70                  75                  80
     90 Met Glu Val Arg Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
     91                 85                  90                  95
     92 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
     93             100                 105                 110
     94 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
     95         115                 120                 125
     96 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
     97     130                 135                 140
     98 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
     99 145                 150                 155                 160
    100 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
    101                 165                 170                 175
    102 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
    103             180                 185                 190
    104 Arg
    106 <210> SEQ ID NO: 3
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RAW SEQUENCE LISTING DATE: 03/18/2002
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Input Set : **A:\GENENT.057CP2113001.txt**
Output Set: **N:\CRF3\03182002\I813775C.raw**

<211> LENGTH: 585
<212> TYPE: DNA
<213> ORGANISM: Pan troglodytes
<400> SEQUENCE: 3
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ctgggcctcc cagtcctggg cgccccacca cgcctcatct gtgacagccg agtcctggag 120
aggtacctct tggaggccaa ggaggccgag aatatcacga cgggctgtgc cgaacactgc 180
agcttgaatg agaatatcac tgtcccagac accaaagtta atttctatgc ctggaagagg 240
atggaggtca ggcagcaggc cgtagaagtc tggcagggcc tggccctgct ctcggaagct 300
gtcctgcggg gccaggccct gttggtcaac tcttcccagc cgtgggagcc cctgcagctg 360
catgtggata aagccgtcag tggccttcgc agcctcacca ctctgcttcg ggctctggga 420
gcccagaagg aagccatctc ccctccagat gcggcctcag ctgctccact ccgaacaatc 480
actgctgaca ctttccgcaa actcttccga gtctactcca atttcctccg gggaaagctg 540
aagctgtaca caggggaggc ctgcaggaca ggggacagat gacca 585
<210> SEQ ID NO: 4
<211> LENGTH: 193
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 4

Met	Gly	Val	His	Glu	Cys	Pro	Ala	Trp	Leu	Trp	Leu	Leu	Leu	Ser	Leu
1				5				10					15		
Leu	Ser	Leu	Pro	Leu	Gly	Leu	Pro	Val	Leu	Gly	Ala	Pro	Pro	Arg	Leu
		20					25					30			
Ile	Cys	Asp	Ser	Arg	Val	Leu	Glu	Arg	Tyr	Leu	Leu	Glu	Ala	Lys	Glu
	35					40					45				
Ala	Glu	Asn	Ile	Thr	Thr	Gly	Cys	Ala	Glu	His	Cys	Ser	Leu	Asn	Glu
50					55					60					
Asn	Ile	Thr	Val	Pro	Asp	Thr	Lys	Val	Asn	Phe	Tyr	Ala	Trp	Lys	Arg
65				70					75					80	
Met	Glu	Val	Gly	Gln	Gln	Ala	Val	Glu	Val	Trp	Gln	Gly	Leu	Ala	Leu
			85					90					95		
Leu	Ser	Glu	Ala	Val	Leu	Arg	Gly	Gln	Ala	Leu	Leu	Val	Asn	Ser	Ser
		100					105					110			
Gln	Pro	Trp	Glu	Pro	Leu	Gln	Leu	His	Val	Asp	Lys	Ala	Val	Ser	Gly
	115					120					125				
Leu	Arg	Ser	Leu	Thr	Thr	Leu	Leu	Arg	Ala	Leu	Gly	Ala	Gln	Lys	Glu
130					135					140					
Ala	Ile	Ser	Pro	Pro	Asp	Ala	Ala	Ser	Ala	Ala	Pro	Leu	Arg	Thr	Ile
145				150					155					160	
Thr	Ala	Asp	Thr	Phe	Arg	Lys	Leu	Phe	Arg	Val	Tyr	Ser	Asn	Phe	Leu
			165					170					175		
Arg	Gly	Lys	Leu	Lys	Leu	Tyr	Thr	Gly	Glu	Ala	Cys	Arg	Thr	Gly	Asp
		180					185					190			

Arg

<210> SEQ ID NO: 5
<211> LENGTH: 193
<212> TYPE: PRT
<213> ORGANISM: Pan troglodytes
<400> SEQUENCE: 5

RAW SEQUENCE LISTING DATE: 03/18/2002
PATENT APPLICATION: **US/09/813,775C** TIME: 15:26:57

Input Set : **A:\GENENT.057CP2113001.txt**
Output Set: **N:\CRF3\03182002\I813775C.raw**

```
161 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
162  1               5                  10                  15
163 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
164             20                  25                  30
165 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
166         35                  40                  45
167 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
168     50                  55                  60
169 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
170 65                  70                  75                  80
171 Met Glu Val Arg Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
172                 85                  90                  95
173 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
174             100                 105                 110
175 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
176         115                 120                 125
177 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu
178     130                 135                 140
179 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
180 145                 150                 155                 160
181 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
182                 165                 170                 175
183 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
184             180                 185                 190
185 Arg
187 <210> SEQ ID NO: 6
188 <211> LENGTH: 4
189 <212> TYPE: PRT
190 <213> ORGANISM: Pan troglodytes
192 <400> SEQUENCE: 6
193 Met Glu Val Arg
194  1
195 <210> SEQ ID NO: 7
196 <211> LENGTH: 4
197 <212> TYPE: PRT
198 <213> ORGANISM: Pan troglodytes
200 <220> FEATURE:
201 <221> NAME/KEY: UNSURE
202 <222> LOCATION: 2, 4
203 <223> OTHER INFORMATION: Xaa = unknown amino acid
205 <400> SEQUENCE: 7
W--> 206 Asn Xaa Ser Xaa
207  1
208 <210> SEQ ID NO: 8
209 <211> LENGTH: 4
210 <212> TYPE: PRT
211 <213> ORGANISM: Pan troglodytes
213 <220> FEATURE:
214 <221> NAME/KEY: UNSURE
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RAW SEQUENCE LISTING DATE: 03/18/2002
PATENT APPLICATION: US/09/813,775C TIME: 15:26:57

Input Set : A:\GENENT.057CP2113001.txt
Output Set: N:\CRF3\03182002\I813775C.raw

215 <222> LOCATION: 2, 4
216 <223> OTHER INFORMATION: Xaa = unknown amino acid
218 <400> SEQUENCE: 8
W--> 219 Asn Xaa Thr Xaa
220 1
221 <210> SEQ ID NO: 9
222 <211> LENGTH: 4
223 <212> TYPE: PRT
224 <213> ORGANISM: Pan troglodytes
226 <400> SEQUENCE: 9
227 Glu Val Arg Gln
228 1
229 <210> SEQ ID NO: 10
230 <211> LENGTH: 4
231 <212> TYPE: PRT
232 <213> ORGANISM: Pan troglodytes
234 <400> SEQUENCE: 10
235 Val Arg Gln Gln
236 1
237 <210> SEQ ID NO: 11
238 <211> LENGTH: 4
239 <212> TYPE: PRT
240 <213> ORGANISM: Pan troglodytes
242 <400> SEQUENCE: 11
243 Arg Gln Gln Ala
244 1
245 <210> SEQ ID NO: 12
246 <211> LENGTH: 18
247 <212> TYPE: DNA
248 <213> ORGANISM: Pan troglodytes
250 <400> SEQUENCE: 12
251 accgcgcccc ctggacag 18
253 <210> SEQ ID NO: 13
254 <211> LENGTH: 25
255 <212> TYPE: DNA
256 <213> ORGANISM: Pan troglodytes
258 <400> SEQUENCE: 13
259 catccacttc tccggccaaa cttca 25
261 <210> SEQ ID NO: 14
262 <211> LENGTH: 21
263 <212> TYPE: DNA
264 <213> ORGANISM: Pan troglodytes
266 <400> SEQUENCE: 14
267 tttggccgga gaagtggatg c 21
269 <210> SEQ ID NO: 15
270 <211> LENGTH: 31
271 <212> TYPE: DNA
272 <213> ORGANISM: Pan troglodytes
274 <400> SEQUENCE: 15

→ Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY DATE: 03/18/2002
PATENT APPLICATION: **US/09/813,775C** TIME: 15:26:58

Input Set : **A:\GENENT.057CP2113001.txt**
Output Set: **N:\CRF3\03182002\I813775C.raw**

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:41 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:206 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:574 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:640 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:673 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29
L:706 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
L:739 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:772 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
L:805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33
L:842 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
L:879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35
L:916 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37
L:990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38
L:1027 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
L:1064 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40
L:1101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:1138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42
L:1175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:1212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44
L:1249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45
L:1286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:1323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47
L:1360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
L:1397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49